

DOW™ LDPE 993I

Low Density Polyethylene Resin
The Dow Chemical Company

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Technical Data

Product Description

- Low Density Polyethylene (LDPE)
- Typical applications include toys, lids, and closures
- Good gloss, rigidity, excellent flow
- Complies with U.S. FDA 21 CFR 177.152 (c) 2.1
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with EU, No 10/2011
- Consult the regulations for complete details

DOW Polyethylene 993I Low Density Polyethylene Resin is a medium molecular weight distribution homopolymer designed to offer good gloss and rigidity with excellent flow characteristics. This resin has good processability over a wide range of molding conditions.

General

| | | | |
|---------------------------|-----------------------------------|------------------------------|---|
| Material Status | • Commercial: Active | | |
| Search for UL Yellow Card | • The Dow Chemical Company | | |
| Availability | • Asia Pacific | • Latin America | • North America |
| Additive | • Antiblock: No | • Processing Aid: No | • Slip: 400 ppm |
| Agency Ratings | • EU No 10/2011 | • FDA 21 CFR 177.1520(c) 2.1 | • HPFB (Canada) No Objection ¹ |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

| Physical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|---|-------------------------|-------------------------|-------------|
| Density | 0.923 g/cm ³ | 0.923 g/cm ³ | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 25 g/10 min | 25 g/10 min | ASTM D1238 |
| Environmental Stress-Cracking Resistance (ESCR) 122°F (50°C), 100% Igepal, F50 | < 1.00 hr | < 1.00 hr | ASTM D1693 |

| Mechanical | Nominal Value (English) | Nominal Value (SI) | Test Method |
|------------------------------|-------------------------|--------------------|-------------|
| Tensile Strength | | | ASTM D638 |
| Yield | 1500 psi | 10.3 MPa | |
| Break | 1700 psi | 11.7 MPa | |
| Tensile Elongation | | | ASTM D638 |
| Yield | 3.0 % | 3.0 % | |
| Break | 40 % | 40 % | |
| Flexural Modulus - 2% Secant | 46000 psi | 317 MPa | ASTM D790 |

| Impact | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--------------------------------------|---------------------------|-----------------------|-------------|
| Notched Izod Impact (73°F (23°C)) | 7.9 ft·lb/in | 420 J/m | ASTM D256 |
| Tensile Impact Strength ³ | 120 ft·lb/in ² | 252 kJ/m ² | ASTM D1822 |

| Hardness | Nominal Value (English) | Nominal Value (SI) | Test Method |
|------------------------------|-------------------------|--------------------|-------------|
| Durometer Hardness (Shore D) | 43 | 43 | ASTM D2240 |

| Thermal | Nominal Value (English) | Nominal Value (SI) | Test Method |
|--|-------------------------|--------------------|-----------------|
| Deflection Temperature Under Load 66 psi (0.45 MPa), Unannealed | 104 °F | 40.0 °C | ASTM D648 |
| Brittleness Temperature | -29.0 °F | -33.9 °C | ASTM D746 |
| Vicat Softening Temperature | 199 °F | 92.8 °C | ASTM D1525 |
| Melting Temperature (DSC) | 230 °F | 110 °C | Internal Method |
| Peak Crystallization Temperature (DSC) | 212 °F | 100 °C | Internal Method |

Additional Information

Plaque molded and tested in accordance with ASTM D4976.

Notes

¹ With limitations

² Typical properties: these are not to be construed as specifications.

³ Type S

1 of 2

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Where to Buy

Supplier

The Dow Chemical Company

Telephone: +1-800-258-2436 (Americas); 00800-3-694-6367 (Europe, Middle East, Africa, and India); +800-7776-7776 (Asia Pacific)
Web: <http://www.dow.com>

Distributor

Entec Polymers

Telephone: 833-319-0299

Web: https://www.entecpolymers.com/?utm_source=ul&utm_medium=paid%20association&utm_campaign=entec%20%7C%20entec%201&utm_term=ul%20%7C%20where%20to%20buy

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